Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.–31. (Cancelled)

32. (Currently Amended) A method of identifying treatment ~~candidates~~ therapies as therapeutic strategies for preventing ventricular tachycardia from developing into ventricular fibrillation, said method comprising:

~~providing a subject in~~ detecting ventricular tachycardia in a subject;

monitoring intervals between ~~the~~ electrical stimuli in the heart of the subject;

determining if an initial 3 stimuli in groups of 4 stimuli from said monitoring in the heart correspond to rest interval values (I) predicted to lead to ventricular fibrillation ~~consistent with the histogram of Figure 7~~ as defined by

$$I_{n+1}(x_i) = \tau + \sum_{j=0}^{i-1} \frac{\Delta x}{c(I_{n+1}(x_j))} - \sum_{j=0}^{i-1} \frac{\Delta x}{c(I_n(x_j))} - D_{n+1}(x_i), \underline{\text{wherein } \tau \text{ is a time}}$$

interval between activations applied to a pacing site (x_i), Δx is 0.1, $I_{n+1}(x_i)$ is a rest interval value of the $n+1$th action potential at a pacing site (x_i), $I_n(x_i)$ is a rest interval value of an nth action potential at a pacing site (x_i), $D_{n+1}(x_i)$ is action potential duration of an $n+1$th action potential at pacing site (x_i), c is a velocity recovery function of $I_n(x_i)$ and $I_{n+1}(x_i)$, respectively;

identifying treatment ~~candidates~~ therapies which prevent occurrence of a fourth stimuli corresponding to [[a]] the rest interval values ~~value predicted to lead to ventricular fibrillation consistent with the histogram of Figure 7~~; and

identifying treatment ~~candidates~~ therapies which prevent said ventricular tachycardia from becoming ventricular fibrillation as therapeutic strategies for prevention of ventricular fibrillation, wherein said detecting and said monitoring are performed with an implantable medical device.

33. (Withdrawn- Currently Amended) The method according to claim 32, wherein the treatment ~~candidate~~ therapy is a pharmaceutical compound.

34. (Withdrawn) The method according to claim 33, wherein the pharmaceutical compound is a calcium channel antagonist.

35. (Currently Amended) The method according to claim 32, wherein the treatment ~~candidate~~ therapy is one or more electrical impulses.

36. (Withdrawn- Currently Amended) The method according to claim 32, wherein said identifying identifies treatment ~~candidates~~ therapies which achieve velocity restitution values consistent with the histograms of Figures 8B and 8C as therapeutic strategies for prevention of ventricular fibrillation.

37. (Withdrawn- Currently Amended) The method according to claim 32, wherein said identifying identifies treatment ~~candidates~~ therapies which achieve potential duration restitution values consistent with the histograms of Figures 9B and 9C as therapeutic strategies for prevention of ventricular fibrillation.

38. (Currently Amended) The method according to claim 32, said identifying identifies treatment ~~candidates~~ therapies which achieve cardiac memory values of 0.58 to 0.8 ~~consistent with the histograms of Figures 10B and 10C~~ as therapeutic strategies for prevention of ventricular fibrillation.